

Options Considered

Android App for the Disabled

September 24th, 2012

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Client: Scott Weissman, IPAT



<http://www.geek.com/articles/mobile/a-look-at-the-flavors-of-android-4-0-20120710/>

INTRODUCTION:

The Android app for the disabled will help those with cognitive issues to use their phone easier and help them organize their life. The app will be a launcher that will change the look of the home screen to make it easier to understand. The launcher will have applications that will make organizing and remembering their life easier such as a calendar with reminders, voice/text/video memos and easy to use voicemail manager.

PREVIOUS WORK:

There are a few Android apps available in the market for those who are cognitively impaired or have difficulty in using the Smartphones or those who are suffering from Autism which are similar to the apps which we are planning to build .

We did research on the Android apps to find out which are similar to ours and we found out that there are only a few.

But the main thing is that all these Existing apps are individual, i.e they are available in the Android Market separately. But there is no app in the Android Market which provides all the features which we planning to build.

The Apps are:-

1) **Voice Secretary/ Voice Reminder:-**

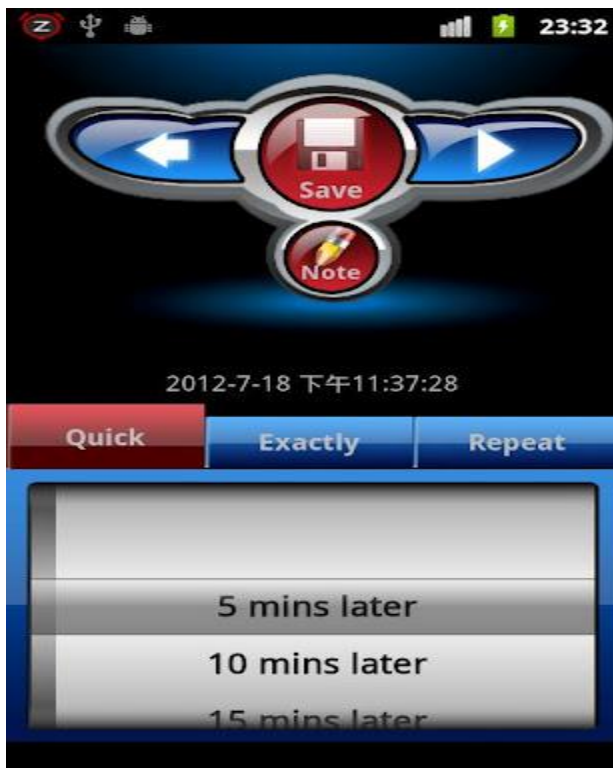
http://www.androidzoom.com/android_applications/productivity/voice-secretaryvoice-reminder_cogfc.html

This app is developed by G-Power.

This app is just like your personal secretary. It will remind you of each and every basic tasks for which you have set a reminder, like:-

- Easy start your reminders with just talk to your [phone](#) when driving or walking and so on.
- Remind you to take medication on time , call your parents, friends .
- It reminds you take any important appointment.
- Make Shopping list and so on

APP SCREENSHOTS



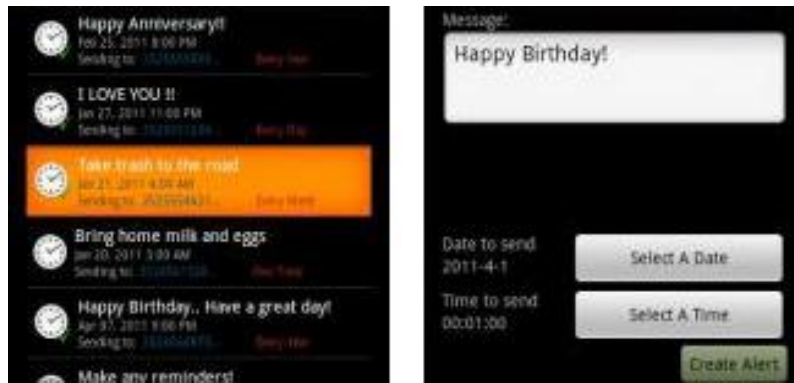
2) Textalert Free-SMS Reminder:-

This app is developed by Activity Labs.

http://www.androidzoom.com/android_applications/communication/textalert-free-sms-reminder_qvay.html

Textalert allows you to schedule SMS/Text Reminders to yourself, or any of your contacts instantly. You can remind yourself or others of meetings, birthdays, a television show, anniversary, errands, bills, and so much more!

APP SCREENSHOTS



3) **Fastalert:-**

<https://play.google.com/store/apps/details?id=com.oneearthapps.fastalert>

This app is developed by TEAM Apps.

This app can be used to set a text/picture as an alert/reminder.

Use photo/text to set an alert.

Buying this version of Fast Alert adds UNLIMITED number of reminders for both active and archived alerts.

In addition this version adds ability to use your photo gallery as a source of photo reminders.

APP SCREENSHOTS



4) **DW Contacts & Phone & Dialer**:-

<https://play.google.com/store/apps/details?id=com.dw.contacts.free&hl=en>

This app is developed by DWP.

This app is used to maintain your contacts, dialer, sms, mms, email etc all at 1 place. Some of the Key features are:-

Multi-language support, quick dial manager (long press 0-9), quick dial last number, display call history on dialer, share contacts (text, vcard) via SMS, email etc.

APP SCREENSHOTS



- 5) There are many voicemail apps in the android market which are used for maintaining the voicemail like YouMail visual voicemail , visual voicemail Plus etc.

Visual voicemail Plus:-

<https://play.google.com/store/apps/details?id=com.phonefusion.voicemailplus.and&hl=en>

This app is developed by PhoneFusion.

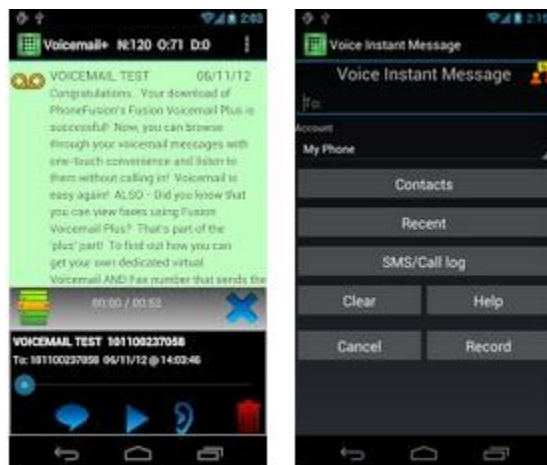
DESCRIPTION :-

Manage your Voicemails and FAXES in a whole new way via your device, email, phone or computer.

PhoneFusion's original Visual Voicemail (VVM) application was the FIRST for Android with over 500,000 downloads, 10,000 comments and a 4 star rating.

More features and options than carrier voicemail services. Respond to voicemail with a Voice Instant Message (VIM).

APP SCREENSHOTS



- 6) **Walky Talky** :-

<https://play.google.com/store/apps/details?id=com.googlecode.eyesfree.walkytalky>

This app is developed by Eyes-Free Project.

This app is basically a navigation app which works with the GPS of your android phone and has following features:-

WalkyTalky is an accessible navigation aid.

- Periodically updates the status bar with your current location to the nearest street address
- Ability to input a destination and directly launch Maps Navigation in Walking directions mode

7) Big launcher

<https://play.google.com/store/apps/details?id=name.kunes.android.launcher.activity&hl=en>

This app is developed by Big Launcher Team.

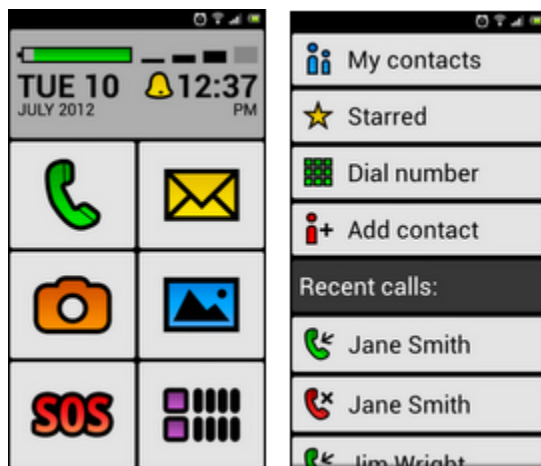
This is one of the best apps which we found in the android market.

This app is particularly designed for elderly and people with vision problems because of its fast and simple home screen .

Key features are:-

- HOME SCREEN REPLACEMENT
The BIG Launcher replaces the common user interface of any phone with Android 2.1 or higher. It was designed for readability and easy use. It is controlled by single touches - no swipes, no long presses.
- EASY TO USE PHONE
- BIG FONT SMS EDITOR
- QUICKLY RUN ALL YOUR APPS
- FOR ELDERLY OR KIDS

APP SCREENSHOTS



8) **Batteryminder**

<https://play.google.com/store/apps/details?id=com.rollerbush.batteryminder&hl=en>

This app is developed by Rollerbrush.

This app is used to indicate the battery level and remind you to charge it, if it goes below a certain level assigned by you.

APP SCREENSHOTS



DESIGN OPTIONS:

Big Picture: Operating System

- Android:
 - Advantages: C++/C and Java, open sourced, popular usage, many applications open sourced as well
 - Disadvantages:
- iOS:
 - Advantages: Popular, C++/C
 - Disadvantages: Mostly closed sourced, has application similar to what we are developing
- Blackberry:
 - Advantages: can create apps through an API, C++
 - Disadvantages: closed sourced, not popular
- Windows:
 - Advantages: C/C++
 - Disadvantages: new system, small market, closed sourced

Our Choice: Android. We choose Android as our operating system because it's open source, a popular system on many phones and has multiple tutorials and support for creating new applications. For the application we are trying to create, having an open sourced platform is essential to adding more functionality and being able to bring in already made applications for our use.

Big Picture: Home Screen Layout

Physical Layout

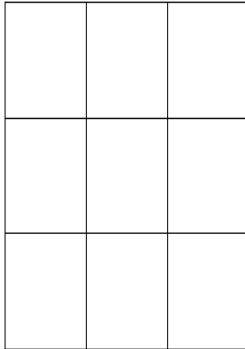


Figure 2: 3x3 Layout

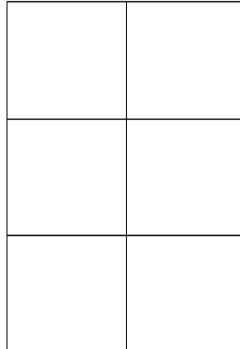


Figure 3: 2x3 Layout



Figure 1: 2x4 Layout

Our Choice: 2x3 layout

We decided we are going to display the 2x3 layout on our home screen. The 3x3 layout is too complex and cluttered to look at which is not what our client is looking for. Two columns is the right look for our home screen and we feel having 6 icons displayed at a time will give the home screen the simplistic look our client is striving for. The icons can be displayed largely and clearly for the user. Having any less than six icons displayed would make it difficult to navigate the phone and too much time would be spent searching.

Big Picture: Integrate Old Apps vs. Creating New Apps

- Old:
 - Advantages: save time, tested on market users, know it works
 - Disadvantages: time to integrate into our system, might not meet our needs exactly, difficult to change
- New:
 - Advantages: create exactly what client needs, flexibility, integrate easily into our platform/other code
 - Disadvantages: time consuming, need to make from scratch, not tested on market users

Our Choice: Both. After looking at the options on the Android market for applications for what we need, we have seen that there is a variety of applications that we could integrate with our launcher. Depending on whether they are open source or not we could integrate them into our app. Some of the functionality we are looking for, however, doesn't exist in the way needed so we will need to create brand new applications to put into the

launcher. So whether we create a new application or use one already on the market will depend on app to app basis.

Big Picture: Application Setup

We decided to have the initial application setup be more technically intensive than usual so that when using the application afterwards, the user has it setup more to their liking. In this way they can choose which integrated applications they would like to show up on their home screen and which apps they don't think they would use.

Little Details: Specific Applications

Below is a list of applications generally on a mobile phone. We decided whether or not to include them in our application and provided a reason for our decision. The applications that are a "no" may be eventually be used, this represents room for future improvement in our launcher, but we felt that these applications were not essential to the functionality of our launcher at this time.

- Camera: Yes. According to the client, the users would enjoy using the camera. The photos help trigger memories.
- Calendar: Yes. This will be a crucial part in keeping track of things for the user.
- GPS: Yes. This might not be implemented until second semester. Knowing where they are and how to get somewhere will be beneficial for the user.
- Alarm: Yes. This functionality will remind the user when they have a task to do.
- Video: Yes. The video function will come in handy when remembering how to do things.
- Telephone: Yes. It's the point of having a mobile phone.
- Contacts: Yes. So the user won't have to remember numbers. Keep the people they know.
- Task List: Yes. To help the user keep track of what they need to do.
- Calculator: No.
- Texting: No.
- Internet Browser: No.
- Play Store: No.
- Games: No.

BUDGET:

For this project our budget is quite simple. Most of the software need to code and test the Android app is available online for no cost. We will need \$25.00 to pay for getting our application out on the Google Play market.

- \$25.00 – Google Play fee

TIMELINE:

Name

Week

Who

Requirements Capture meeting

3

All

Requirements Capture

4

All

Options Considered

6

Steph and Vishav

Android app coding training

7,8

All

Base platform of launcher

??

Senior Design group 3

>home screen layout

>access apps from home screen

>ability to add in more functionality

Start up - set up

??

Senior Design group 3

Video/voice/text reminder/calendar app

9,10,11

Steph and Vishav

>calendar

10

>text

10

>voice

11

>video

11

Voicemail app

11,12

Steph or Vishav

Charge battery reminder

12

Steph or Vishav

Integrate apps with base platform/debugging

13,14

All

Preparation for presentation

15

All

Presentations

16

All